In the claims:

1. (Currently amended) A method of managing usage of a resource in a network system, the method comprising:

~~maintaining a database~~ indicating a value representing a total amount of usage of the resource ~~usage in the network system~~ by at least two processes using the resource;

indicating an available amount of credit for usage of [[a]] the resource by ~~a process~~ the at least two processes based on said ~~total resource usage~~ value;

decreasing said ~~total resource usage~~ value according to a predetermined function of time; and

regulating usage of the resource by the ~~process as a function of~~ at least two processes based on the indicated available amount of credit and allowing increased usage of the resource by the ~~process~~ at least two processes based on said decreasing.

2. (Previously Amended) The method of claim 1, wherein the resource comprises one of memory space or system processor time.

3. (Previously amended) The method of claim 1, wherein the network comprises an embedded computer system.

4. (Original) The method of claim 1, wherein the network operates in a real-time networking environment.

5. (Original) The method of claim 1, wherein the method is modeled as a leaky bucket.

6. (Previously amended) The method of claim 1, further comprising:
determining a priority of the resource; and
allocating the resource based on the priority of the resource.

7.   (Previously amended) The method of claim 1, wherein regulating usage of the resource comprises modifying the available credit by adjusting a maximum resource usage value.

8.   (Currently amended) The method of claim 1, further comprising notifying [[the]] a process of the availability of the credit when the indicated available credit is greater than a requested usage amount if the indicated available credit is initially less than [[a]] the requested usage amount.

9.   (Previously amended) The method of claim 8, wherein notifying the process comprises sending a message to a network address associated with the process when the requested usage amount is greater than the available credit.

10.   (Currently amended) A method of managing a plurality of resources in a network having a plurality of devices, comprising:

maintaining a database for each resource in the network, indicating a value representing a total amount of usage of the resource usage in the network system by at least two devices;

for each of the plurality of resources accessed by each of the devices, creating a software tool on the device for accessing the resource, and using the software tool to indicate an available amount of credit for usage of the resources resource by the device, said amount of credit being based on said value total resource usage,

decreasing said total resource usage value according to a predetermined function of time; and

regulate regulating the usage of any of the plurality of the resources by any of the plurality of devices as a function of the indicated available amount of credit and allowing increased usage of the resource by the process device based on said decreasing.

11.   (Currently amended) The method of claim 10, wherein [[the]] creating the software tool comprises:

allocating a descriptor representative of any of the software tools to any of the plurality of devices; and

associating with each software tool a maximum usage level.

12.   (Currently amended) The method of claim 11, wherein [[the]] using the software tool [[step]] comprises:

decrementing the maximum usage level of the software tool in response to the use of the resource associated with the tool by any of the plurality of devices;

calculating the available amount of credit based on the usage of the resource associated with the tool as a function of the maximum usage level; and

indicating to a device waiting to use the resource associated with the tool of the available amount of credit.

13.   (Currently amended) The method of claim 12, wherein [[the]] indicating [[step]] to the device comprises sending a message to a network address associated with the waiting device to indicate when the available exceeds a specified usage level.

14.   (Currently amended) The method of claim [[13]] 12, further comprising incrementing the maximum usage level to at least correspond to the specified be equal to or more than a usage level requested by the device.

15.   (Original) The method of claim 11, further comprising overriding the maximum usage level to allow a device access to one of the plurality of resources.

16.   (Original) The method of claim 10, further comprising destroying the software tool in response to a request from one of the devices.

17.   (Currently amended) Computer software, residing on a computer-readable medium at a device connected to a network, comprising instructions to cause the device to perform the following operations:

maintaining a database indicating a value representing a total amount of usage of a resource usage in the network system by at least two devices;

indicating an available amount of credit for usage of [[a]] the resource based on said ~~total resource usage~~ value;

decreasing said value ~~total resource usage~~ according to a function of time; and

regulating usage of the resource by ~~a process~~ the device as a function of the indicated available amount of credit and allowing increased usage of the resource by the ~~process~~ device based on said decreasing.

18. (Currently amended) A network including a plurality of devices, comprising:

a plurality of resources running in the network; and

computer software, residing on a computer readable medium at each device accessing the plurality of resources to cause the device to perform the following operations:

~~maintaining a database~~ indicating a value representing a total amount of usage of a resource ~~usage in the network system~~ by at least two devices;

indicating an available amount of credit for usage of [[a]] the resource based on said ~~total resource usage~~ value;

decreasing said ~~total resource usage~~ value according to a predetermined function of time; and

regulating usage of the resource by ~~a process~~ the device as a function of the indicated available amount of credit and allowing increased usage of the resource by the ~~process~~ device based on said decreasing.

19. (Previously amended) The network of claim 18, wherein the plurality of resources comprise memory space or system processor time.

20. (Previously amended) The network of claim 18, wherein the network comprises an embedded computer system.

21. (Previously amended) The network of claim 18, wherein the network operates in a real-time networking environment.

22.   (Currently amended) The method of claim 1 wherein the available amount of credit comprises a difference between a ~~first~~ second value representing a maximum resource usage allocated to the at least two processes ~~process~~ and a ~~second~~ the first value representing ~~an~~ the total amount of usage of the resource currently used by the at least two processes~~process~~.

23.   (Previously added) The method of claim 1 wherein the available amount of credit increases per unit of time by an estimated value of the resource that becomes available per unit of time.

24.   (Previously amended) A method of managing usage of a resource in a network system, the method comprising:

    ~~maintaining a database~~ indicating a value representing a total amount of usage of the resource ~~usage in the network system~~ by at least two processes;

    indicating to each of ~~a plurality of~~ the at least two processes an available amount of credit for usage of the resource by the process based on said ~~total resource usage~~ value;

    decreasing said ~~total resource usage~~ value according to a function of time; and

    regulating usages of the resource by the processes according to the indicated available amount of credits for the processes and allowing increased usage of the resource by the ~~process~~ processes based on said decreasing.

25.   (New) The method of claim 1, further comprising:

    determining a priority of a process accessing the resource; and

    allocating the resource based on the priority of the process.

26.   (New) The method of claim 1 in which decreasing said total amount of usage of the resource according to a function of time comprises decreasing said total amount of usage of the resource by a preset amount per unit of time.

27.   (New) The method of claim 26 in which regulating usage of the resource by the at least two processes comprises regulating usage of the resource based on said decreasing so that the total amount of usage of the resource does not exceed the preset amount per unit of time.

28.   (New) The method of claim 26 in which the preset amount represents an estimated amount of resource that becomes available per unit of time.